

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

SHINYA SOEDA

Application No. Unassigned Art Unit: Unassigned

Filed: February 20, 2002 Examiner: Unassigned

For: SEMICONDUCTOR
DEVICE AND METHOD
OF FABRICATING
THE SAME

PENDING CLAIMS AFTER ENTRY OF PRELIMINARY AMENDMENT

1. A semiconductor device comprising:
a semiconductor substrate having a plurality of regions;
a resistor group including a plurality of resistors located in one of said regions of said semiconductor substrate;
a metal interconnection layer opposite the region in which said resistor group is located; and
a shielding layer between said resistor group and said metal interconnection layer.
2. The semiconductor device according to claim 1, comprising at least one DRAM region and one logic region, including a layer common to a bit line layer in said DRAM region and used as said shielding layer in said logic region.
3. The semiconductor device according to claim 1, comprising
at least one DRAM region with a stacked capacitor and one logic region, wherein said stacked capacitor in said DRAM region includes a lower capacitor electrode layer, a dielectric film, and an upper capacitor electrode layer, and

a layer common to said upper capacitor electrode layer in said DRAM region and used as said shielding layer in said logic region.

4. The semiconductor device according to claim 1, wherein said shielding layer has a fixed potential.

5. A semiconductor device comprising:
a semiconductor substrate;
a signal interconnection layer on said semiconductor substrate; and
a shielding layer on at least one side of said signal interconnection layer.

6. The semiconductor device according to claim 5, comprising at least one DRAM region and one logic region, including a layer common to a gate electrode layer in said DRAM region and used as said shielding layer in said logic region.

7. The semiconductor device according to claim 5, comprising at least one DRAM region and one logic region, including a layer common to a bit line layer in said DRAM region and used as said shielding layer in said logic region.

8. The semiconductor device according to claim 5, comprising at least one DRAM region with a stacked capacitor and one logic region, wherein said stacked capacitor in said DRAM region includes a lower capacitor electrode layer, a dielectric film, and an upper capacitor electrode layer, and a layer common to said upper capacitor electrode layer in said DRAM region and used as said shielding layer in said logic region.

9. The semiconductor device according to claim 5, wherein said shielding layer has a fixed potential.

10. A method of fabricating a semiconductor device having at least one DRAM region and one logic region and having a resistor group in said logic region, the method comprising:

forming a resistor group in said logic region;
forming a shielding layer in said DRAM region and said logic region; and
forming a metal interconnection layer opposite a portion of said logic region
where said resistor group is located.

11. The method according to claim 10, wherein said shielding layer is a bit line layer.

12. The method according to claim 10, further comprising forming a stacked capacitor having a lower capacitor electrode layer, a dielectric film, and an upper capacitor electrode layer in said DRAM region, wherein said capacitor electrode layer is said shielding layer.

13. The method according to claim 10, further comprising fixing potential of said shielding layer.

14. A method of fabricating a semiconductor device having at least one DRAM region and one logic region and having a signal interconnection layer in said logic region, the method comprising:

forming a signal interconnection layer in said logic region; and
forming a shielding layer on at least one side of said signal interconnection layer in said DRAM region and said logic region.

15. The method according to claim 14, wherein said shielding layer is a gate electrode layer.

16. The method according to claim 14, wherein said shielding layer is a bit line layer.

17. The method according to claim 14, further comprising forming a stacked capacitor having a lower capacitor electrode layer, a dielectric film, and an upper capacitor electrode layer in said DRAM region, wherein said capacitor electrode layer is

said shielding layer.

18. The method according to claim 14, further comprising fixing potential of said shielding layer.

1007767-022002